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### Preventing suicide

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# PREVENTING SUICIDE; NURSE EDUCATION AND THE OCCLUDED ISSUE OF GENDER

## Abstract

Suicide prevention training recommended as part of national suicidal strategies across the UK have contributed to a reduction in suicide. Previous studies have found suicide prevention training changes attitude and increases confidence in ability to utilise suicide prevention strategies. There is limited evidence relating to the different responses to suicide prevention training by females and males. As the majority of nurses are female it is important to know if they report the same increases in confidence after suicide prevention training.

An exploratory study utilising a survey design and repeated measures was used to investigate the effect of SafeTALK training on the level of general perceived self-efficacy (GPSE) in student nurses and to observe for any gender-related differences.

A sample (N=128) of first year student nurses were asked to complete a GPSE assessment pre and post SafeTALK training. Males reported higher scores on both total pre and post-training scores of GPSE and on mean scores per question compared to females.

An effect of time ( $F(1, 118)=20.07, p=.001$ ) but no effect of gender ( $F(1, 118)=3.53, p=.06$ ) was found. A post-hoc sample size calculation revealed that a replication of the current investigation with a sample size of N=15 (males), N=155 (females), would be likely to find a statistically significant difference between genders in GPSE scores. It may be prudent to consider joint facilitation, with both male and female facilitators of SafeTALK training sessions. Specific pedagogical strategies can also be used to promote an increase in self-efficacy in those people undertaking SafeTALK training.

## Highlights

- Suicide prevention training has contributed to the reduction in suicides
- Suicide prevention training increases confidence in utilising suicide prevention strategies
- There was a significant increase in self-efficacy over time
- A sample of 15=males, 155=females would have found a significant gender difference
- There are implications for the way in which SafeTALK training is delivered

**Key Words:** Suicide prevention, SafeTALK, self-efficacy, gender.

## Background factors

Suicide refers to 'deliberate action that has life threatening consequences' (World Health Organisation, 2004). Diagnostic definitions relate to 'intentional self-harm' and 'sequele of intentional self-harm/injury/poisoning of undetermining intent' (Samaritans, 2016). Death by suicide is a public health concern and one of three leading causes of death worldwide for those aged between 15-44 years (World Health Organisation, 2012; Heyman et al., 2015). Table 1 lists the rates of suicide for the UK and home countries. Other high risk groups include those over 65 years of age, those with a mental illness, being aged 45-59 years and those in general hospital are three times more likely to exhibit suicidal behaviour than those in the general population (Berlim et al., 2007; Brunero et al., 2008; Huh et al., 2012; Hawton et al., 2013; Office of National Statistics, 2016b). The risk factors for suicide are gender (men), age, family history of/mental illness, severe depression, having a co-morbid mental illness, deprivation, previous suicide attempts, hopelessness, substance misuse and chronic physical illness (Department of Health, Social Services and Public Safety, 2012; Hawton et al., 2013; Scottish Government, 2013; Community, Mental Health and 7 Day Services, 2017).

Nurses working across a variety of clinical settings such as hospital, school, palliative care, prison, community and other clinical settings are in constant contact and are assessing holistic bio-psycho-social needs. The close nature of this relationship and the bio-psycho-social nature of co-morbid physical and mental illnesses mean that nurses are in a prime position to monitor suicidal ideation and implement strategies to prevent suicide.

**Table 1:** Suicide rates in the UK 2013/14 (Samaritans, 2016)

	Overall (%) of 100, 000)	Change from previous year (% of 100, 000)	Males (%) of 100, 000)	Change from previous year (% of 100, 000)	Females (%) of 100, 000)	Change from previous year (% of 100, 000)
UK	10.8	-2.0	16.8	-5.6	5.2	+8.3
England	10.3	-1.0	16.0	-0.1	4.9	+14.0
Northern Ireland	16.5	-12.0	22.9	-10.2	6.5	-17.7
Scotland	13.3	-1.9	19.3	-17.6	7.2	+7.8
Wales	9.2	-5.5	15.3	-37.6	3.4	-38.2

## **Policy responses and suicide prevention strategies**

International organisations such as the WHO (World Health Organisation, 2012; 2014) and UK national governments have responded by developing and implementing suicide prevention strategies such as the 'Preventing suicide; A global imperative', 'Talk to me' in Wales, 'Choose Life' in Scotland, 'Protect Life' in Northern Ireland as well as the National Suicide prevention strategy for England. One of the common characteristics within each of these strategies is to support and training of key frontline staff in suicide preventions (Department of Health, 2012; Scottish Government, 2013, Department of Health, Social services and Public Health, 2012, Welsh Government, 2015).

Training in suicide prevention has traditionally been provided within mental health nurse training, however, suicide prevention strategies have recommended the provision of suicide prevention training to all frontline staff, first responders and those working with vulnerable groups (Department of Health, Social Services and Public Services, 2012; Welsh Government, 2015). Vulnerable groups have been defined by virtue of age, gender, unemployment status, living alone, those with associated substance misuse problems, looked after children, socio-economically deprived, contact with the criminal justice system and those with mental health problems (Community, Mental Health and 7 Day Services, 2017; Welsh Government, 2015). In Northern Ireland the protecting life strategy recommends training to a range of health and social care staff and other community gatekeepers such as teachers, community workers, youth workers, trade union officials, clergy, taxi drivers and sports coaches (Department of Health, Social Services and Public Services, 2012). In Scotland the target of 50% of frontline NHS staff being trained in suicide prevention was achieved in September 2013 and there is a commitment to the extension of training in suicide assessment/prevention to all undergraduate mental health nurses and all probationer police officers (Scottish Government, 2013).

Within the UK professional nursing groups have passed resolutions and have been granted a mandate by their members to pressure HEI's in the UK to extend suicide prevention training to all fields of nursing (Hulat, 2017). The rationale for this course of action is based on four factors: 1. It is responsibility of all nurses to preserve the safety of people (Heyman et al., 2015; Hulat, 2017), 2. High risk groups come from a range of physical and mental health backgrounds as well as age ranges (Berlim et al., 2007; Huh et al., 2012), 3. The lack of perceived knowledge and skills reported by nurses for helping people expressing suicidal ideas and intent (Hulat, 2017), and 4. Suicide prevention training provided to staff in key services as part of a wider suicide prevention strategy has contributed to a 19% reduction in suicides (Scottish Government, 2013).

## **Suicide prevention training programmes**

The four interactive suicide prevention training courses recommended are Mental Health First Aid, SafeTALK, Applied Suicide Intervention Skills Training (ASIST), Skills-based Training On risk Management (STORM). Each training course offers a range of skill development from recognition of someone with suicidal thoughts and signposting to support, suicide first aid, risk assessment, safety planning, problem solving, self-harm mitigation and future safety planning.

Suicide prevention training has shown benefits in regard to positive changes in attitude and confidence, increase asking about explore suicidal plans/thinking, more engaging knowledge, greater ability to recognise signs of suicide, reducing stigmatising attitudes and efficacy (Gask et al., 2006; Botega et al., 2007; Gould et al., 2013; Burns et al., 2017). One of the fundamental aspects of effectively using suicide prevention skills in clinical practice is confidence in applying the skills.

## **The lack of studies investigating gender differences in response to suicide prevention training**

A number of studies have investigated the attitudes of health practitioners to suicidal behaviour (Herron et al., 2001; Dahlen and Canetto 2002; Botega et al., 2007; Norheim et al., 2013). Attitudes to suicide and suicide prevention are very important as non-judgemental and respectful attitudes and an empathetic understanding style are not only the foundation for successful policy initiatives (Scottish Government, 2013) but they also help to decrease suicidality support collaborative problem solving, assessment, recognition and better outcomes for people who have suicidal ideation (Gould et al., 2013). Where health professionals are self-confident and have positive and understanding attitudes are more likely to take better care of people with suicidal behaviour (Botega et al., 2007; Giaccherio-Vedana et al., 2017).

Whilst many studies report the gender composition of their samples very few analyse gender differences in practitioner response or attitude. Where studies have reported gender differences there are mixed findings. Anderson et al. (2000) found female participants were less likely to agree with the statement that people with suicidal intent is making a 'cry for help'. In a sample of health professionals Herron et al. (2001) found females reported slightly more positive attitudes to their male peers as measured by the attitudes to suicide prevention scale (means score 34.5 SD6.0 vs. 35.6 SD6.3). This difference was non-significant. Using suicide attitude vignettes relating to non-fatal suicide in a sample of psychology students Dahlen and Canetto (2002) found less agreement with the suicidal decision and the decision was less acceptable compared to males in the sample.

Responses to suicide prevention programmes appear to favour females with suicidal intent compared to males (Hamilton and Klimes-Dougan, 2015).

Poreddi et al. (2016) asked a wide range of questions to randomly selected urban residents. Males in this study reported more positive attitudes to preventative measures compared to females. There was a significant difference between males and females in their answers to questions relating to suicidal prevention; 'it is always possible to help a person having suicidal thoughts ( $\chi^2=9.741$ ,  $p=0.05$ ). In comparison to females males accepted that most suicide attempts were impulsive ( $\chi^2=13.400$ ,  $p=0.01$ ). Males were also more accepting that suicide was a reasonable resolution ( $\chi^2=12.404$ ,  $p=0.05$ ). This attitude was also evident where assisted suicide was considered in relation to an incurable illness ( $\chi^2=11.608$ ,  $p=0.05$ ). Over 68% of the sample of females were aware that suicide can happen without warning compared to 53.6% of the males ( $\chi^2=24.127$ ,  $p=0.001$ ) (Poreddi et al., 2016).

Within a cohort of nursing undergraduate students in the final semester of training females reported significantly more negative attitudes towards suicidal behaviour compared to males, whereas males reported significantly higher perception of professional capacity to manage suicidal behaviour compared to females (Moraes et al., 2016).

These findings provide an insight into gender differences in terms of attitudes to suicidal behaviour but there is a paucity of evidence specifically relating to the response to suicide prevention training by gender. In the present environment where there are predominantly female nurses completing suicide prevention training and delivering suicide prevention strategies it is important to understand any differences in gender responses to suicide prevention training. Any differences in suicidal response by males and females are particularly pertinent to nursing, where there is a much higher ratio of female to males. A recent Nursing and Midwifery Council publication found a 64:36 ratio of female to male nurses (NMC, 2016), which means that if suicide prevention training is open to all nurses then the majority of nurses delivering suicide prevention and awareness initiatives will be females. If there are differences in attitudes/response to training this will have implications for the delivery of suicide prevention training in the future.

### **Suicide prevention and general self-efficacy**

Perceived self-efficacy refers to a series of personalised beliefs and/or convictions about competence or ability to successfully manage and execute a specific task. It supports intrinsic motivation towards performing a specific behaviour or task (Bandura, 1997). As an example if a nurse did not feel confident asking a person if they had suicidal intent and thought that they would be unable to use the correct words to explicitly ask the question then

they would not ask the person if they had suicidal thoughts and a failure to identify a person's suicidal intent.

Clark et al. (2010) evaluated changes in self-efficacy pre and post suicide prevention training in a sample of community and school based staff. Participants reported increases in self-efficacy regarding knowledge about suicide prevention, asking about suicidal intent and persuasion to seek help (Clark et al., 2010). The study also found gender of participants, as part of a wider model, significantly contributed to both pre ( $F(7, 319)=20.8, p<0.001$ ) and post ( $F(7, 284)=9.7, p<0.001$ ) self-efficacy scores.

General perceived self-efficacy (GPSE) is a stable and theoretically useful determinant of task specific self-efficacy (Scherbaum et al., 2006). It is persons' perception of their ability to successfully manage tasks across variety of domains, which moderates the effects of the environment. Suicide prevention training such as SafeTALK requires the effective demonstration of skills across a range of interpersonal and communication skills. There are well established measures of general self-efficacy which have demonstrated acceptable psychometric properties, support the construct validity and can discriminate between those with different levels of the trait and from other similar self-evaluative traits (Scherbaum et al., 2006).

SafeTALK is an acronym used to describe the content and purpose of the training.

SafeTALK stands for - **Suicide Alertness For Everybody and Tell, Ask, Listen and Keepsafe**. (Living Works, 2010). SafeTALK training was developed to help people recognise a person with suicidal thoughts. It was designed to complement the larger two day ASIST (Applied Suicide Intervention Skills Training) offered by Living Works. The purpose would be that SafeTALK trained individuals would be able to identify those at risk of suicide and connect them to people who could carry out a full intervention such as ASIST.

SafeTALK is a 3.5 hour training course that uses video clips, practicing skills and group discussion and the aims are to identify people with suicidal thoughts, facilitate talking about suicide, practice using steps of suicide alertness and to provide information for people with suicidal thoughts so that they can access further help. SafeTALK is offered to student nurses from all fields of nursing to increase their awareness and skills to help them to identify those at risk of suicide and connect them to people who could carry out a full intervention, such as an ASIST trained person or other appropriately trained person such as a health professional. (Living Works, 2015).

## **Research methods**

### **Study aims**

The aim of the current investigation was to determine the impact of SafeTALK on student mental health nurses general perceived efficacy.

The following study objectives were explored:

1. Does SafeTALK significantly increase nurses' level of general perceived self-efficacy?
2. Are there gender-related differences in general perceived self-efficacy following SafeTALK training?

## **Design**

The study was based on an exploratory design to explore the nature of the relationship between SafeTalk training and developing self-efficacy in the participants (Portney and Watkins (2014). The data analysis plan was based on comparison of one-between subjects variable (gender), one-within subjects variable (time – pre and post SafeTALK training) (Field 2013).

Repeated measures were therefore taken pre and post-SafeTalk training (Burns and Grove 2011). The data were collected using a survey design in order to maximise the amount of data collected.

## **Ethical issues**

As participants were also students on the nursing programme and the lead researcher was a member of the academic team there was an ethical requirement to ensure participants were providing informed consent freely. In order to protect participants from feeling duress strategies were put into place to ensure that the bio-ethical principles were adhered to and rights of the participants were safeguarded. All potential participants were provided with written information about the voluntary nature of the study and their rights to withdraw from the study at anytime prior to the study by the lead researcher. It was clearly stated on the information leaflet that deciding not to participate in the study would have any effect on attendance at the SafeTalk training.

The delivery of the SafeTalk training and the data were collected by a team of people independent from the study and lead researcher. The participants were also informed of this strategy in advance of the SafeTalk training adding further protection to the rights of the participants. This meant that even if they had initially agreed to participate in the study they did not have to complete the self-efficacy measurement to demonstrate that they did not wish to participate in the study.

Participants were asked to avoid putting names on the completed self-efficacy measures. They were requested to use a meaningful symbol on the completed pre and post-training self-efficacy measures. This anonymised the completed measures and allowed the research



team to match pre and post-training measures whilst further safeguarding those that did not wish to participate in the study.

All data was stored in a locked cupboard, paper copies were destroyed once the data was transferred to a password protected PC. Independent scrutiny and ethical permission was granted from the universities ethics committee.

## **Participants**

The study sample were (N=128) student nurses studying adult or mental health nursing at the University in question. Adult and mental health fields of nursing are the only two fields of nurse training provided at the university. Mental health nursing students are required to complete SafeTalk training initially and then more intensive suicide prevention training in their second and third year. Adult nurses are exposed to SafeTalk training because of the increased risk of suicide ideation within physical health settings. The students were all in their second trimester of year 1. This group of students were scheduled to receive the suicide training package as part of their year 1 programme of study therefore and there was an opportunity to engage them as research participants.

## **Procedure**

As the key aim of delivering the SafeTalk training was the development of knowledge, skills, attitude and confidence, which adheres to Kirkpatrick's evaluation model of level 2 learning (Kirkpatrick and Kirkpatrick 2007), then as recommended a pre and post event evaluation was completed. Participants were asked to complete a baseline GPSE assessment prior to undertaking SafeTALK training lasting approximately 4 hours and then immediately following SafeTALK training.

## **Results**

A total of 128 participants took part in the SafeTALK training of which 12 male and 108 female participants completed the General Perceived Self-Efficacy (GPSE) Scale and provided complete data for analysis. Descriptive data was organised and tabulated into age ranges. The age of participants ranged from 17 years of age up to 50 years of age. The age range of the sample by gender is listed in table 2.

**Table 2:** Age range of sample by gender.

	17-22 years	23-32 years	33-42 years	43-50 years
Male	3	6	3	1
Female	56	29	18	4

GPSE scores as a function of gender and pre post-training status were compared and are summarised in Table 3. Males scored higher on both total pre and post-training scores of GPSE compared to females (29.67 and 34.00 compared to 29.06 and 31.85). The mean score per question was calculated and also showed males scoring higher than females both pre and post-training (see table 4). The increase in mean score was also higher for males compared to females (0.43 compared to 0.29).

**Table 3:** Mean, standard deviation and distributional characteristics of self-efficacy scores as a function of observation time and gender.

	Pre-training				Post-training			
	Mean	SD	Skew	Kurtosis	Mean	SD	Skew	Kurtosis
Gender								
Male (N=12)	29.67	4.56	-1.04	1.63	34.00	2.13	-0.07	-1.18
Female (N=108)	29.06	3.70	0.16	0.51	31.85	3.42	0.12	0.14

**Table 4:** Mean score and standard deviation of self-efficacy scores as a function of gender

	Pre-training		Post-training	
	Mean	SD	Mean	SD
Gender				
Male (N=12)	2.95	0.44	3.37	0.20
Female N=108	2.90	0.37	3.19	0.35

The range of scores in terms of mean, minimum and maximum scores post-training show that males scored within a range of 3.1-3.7 per question whilst females scored within a range of 2.2-4.0 per question. The narrower range of distribution of scores per question for males was confirmed by the standard deviation which was 0.20 for males and 0.35 for females.

Indicating a more consistent reporting of self-efficacy by the males. The limited number of males within the sample did limit the inferential analysis of the data.

A 2 x 2 analysis of variance was completed and revealed no main effect of gender,  $F(1, 118) = 3.53, p = .06$ , generalised  $n^2 = .01$ . A main effect of time,  $F(1, 118) = 20.07, p = .001$ , generalised  $n^2 = .08$ , was observed. No interaction between gender and time was observed,  $F(1, 118) = 0.93, p = .34$ , generalised  $n^2 = .004$ . A post-hoc sample size calculation of the difference between post-training mean scores and standard deviations as a function of gender revealed that a replication of the current investigation with a sample size of  $N=15$  (males),  $N=155$  (females),  $N=170$  (total) would be likely to find a statistically significant difference (two-tailed) between GPSE scores at this level of analysis.

In terms of reliability the GPSE showed a good level of reliability within the sample as measured by Cronbach's alpha (0.854 pre-training and 0.851 post-training).

## Discussion

The results of the study show that the SafeTALK training had a positive impact on increasing the general self-efficacy of the participants in the whole sample. Both Males and females reported increased self-efficacy post SafeTalk training. This reported increase was more marked in the males in the sample compared to the females. The GPSE mean score difference between pre and post-training mean scores was higher for males and the distribution of reported scores for males was narrower for males. These results suggest that males benefitted more in terms of self-efficacy and this response was more consistent across the whole male sample. These results could have been an artefact of the small size of the males. A smaller group could have reduced the potential for outliers and a more skewed distribution. The findings of this study are consistent with those in the Moraes et al. (2016) study, with males reporting higher levels of professional capacity and confidence to manage suicidal compared to females in their sample of undergraduate nurses.

As the sample was broadly representative of the gender ratio within the wider nursing population (64:36) (NMC, 2016), there are implications for suicide prevention training based on the finding that the training increased the general self-efficacy of males more than females in this sample. This is particularly pertinent if suicide prevention training is extended to all fields of nursing where the recipients of the training will predominantly be female. The study design used here does not provide any evidence about why males reported a higher effect on self-efficacy from the SafeTALK training. Future studies should aim to identify the reasons that contribute to the gender difference in self-efficacy. These reasons will then

inform the design of future training strategies with the aim of increasing' self-efficacy and confidence of all nurses receiving suicide prevention training regardless of their gender. The NMC (2016) have noted the gender ratio had changed from 78:22 in 2014-15 to the presents 64:36 in 2015-16, if the gender ratio continues to change in this way then the findings of this study become less relevant.

The other key implication that arises from the findings of this study relates to developing strategies that increase the general self-efficacy. Bandura (1997) identified a number of influences on self-efficacy, which can inform the design of training strategies and the pedagogy that support learning outcomes for SafeTALK and other suicide prevention training. Performance of the skills of questioning, active listening and keeping safe will provide mastery experiences especially when supported by constructive feedback and a focus on success in performance of the skills. If these skills are rehearsed in groups then this provides the opportunity for other students to provide constructive peer feedback. This feedback can also then be used to inform re-rehearsal of the skills. Facilitators can perform the skills this modelling is vicariously observed and further questions and discussion can facilitate adoption of these skills with confidence. Emotional and affective factors can also influence levels of self-efficacy regarding suicide prevention. Preparation for coming into direct contact with people that have thoughts and plans for suicide through discussion, normalising the response and the reflective process can help to reduce anxiety and increase self-efficacy.

A further possible explanation may be related to the characteristics and gender of the SafeTALK facilitator. Self-efficacy theory confirms the importance of role modelling and the vicarious observation of the behaviour of the model. A male facilitated the SafeTALK sessions in this study. The facilitator was experienced and confident and clearly modelled sensitivity and responses to hearing suicidal thoughts. It could be that the male participants in this study identified with the male facilitator and observed the facilitator's responses and this process imbued the participants with beliefs that males can be sensitive and effectively manage situations with people that have suicidal thoughts. The implication for trainers may be that there is joint facilitation of SafeTALK sessions, which includes a males and female facilitator.

## **Limitations**

The estimate of the sufficiency of sample size to identify a meaningful and significant difference between males and females regarding self-efficacy revealed that the sample was

too small. Therefore the total sample needed to be increased in order to investigate potential gender differences given the borderline '*p*' value (.06) for gender.

A generic self-efficacy measure was used in this study. There have been criticisms about the ability of these measures to capture the validity of the construct of task specific self-efficacy. The interpersonal and observational skills used in delivering suicide prevention strategies do co-vary and are all relevant in the delivery of preventative strategies. Psychometric studies have also demonstrated that general self-efficacy measures have acceptable properties and can discriminate between individuals with different levels of self-efficacy (Scherbaum et al., 2006).

The post-training measure was taken immediately after training. This was completed because the learning on the SafeTalk programme adhered to the training evaluation level 2 learning (Kirkpatrick and Kirkpatrick 2007). Future studies should consider a longitudinal design; taking post-training measures immediately after completion of training to evaluate the knowledge gained and its impact on confidence and further measures evaluate the sustainability of the changes in confidence.

## **Conclusions**

Confidence is important in regard to effectively utilising the skills developed from suicide prevention training and the effective identification of people with suicidal plans (Gask et al., 2006) and self-efficacy is an indicator of beliefs about ability to successfully complete tasks. This study has found potential gender differences in self-efficacy in response to suicide prevention training in a sample of student nurses. As the gender ratio of nurses remains at 2:1 or 3:1 in favour of women this provides implications. Trainers should consider both the gender of the facilitator and the use specific pedagogical strategies that can increase the self-efficacy of student nurses undertaking SafeTALK and other suicide prevention training. Future adequately powered studies should aim to explore the relationship between suicide prevention training and self-efficacy. These studies should specifically focus on any gender differences in response to suicide prevention training and explore the potential reasons for differences in gender response to self-efficacy that arise from suicide prevention training. Within the existing literature descriptive data is routinely collected and a number of studies report the gender characteristics of their sample, future studies that collect this data should complete sub-group analyses for gender differences and report these.

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